

REMARKS

Claims 1-11 and 13-17 are pending in the case. Claims 7, 8 and 14-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Claims 11-13 would be allowable if rewritten to overcome the rejections under 35 U.S.C. § 112, second paragraph. Claims 2 and 11 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 1-6, 9 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Espino *et al.* ("Synthesis of 1,3-Difunctionalized amine Derivatives through Selective C-H Bond Oxidation", *Journal of the American Chemical Society* 123:6935-6936, 2001; "Espino") in view of Aoyama *et al.* ("Catalytic Reactions of Metalloporphyrins. 3¹. Catalytic Modification of Hydroboration-Oxidation of Olefin with Rhodium(III) Porphyrin as Catalyst", *Journal of Organic Chemistry* 52:2555-2559, 1987; "Aoyama"). Claims 1-7, 9-11 and 13-17 are herein amended. Claim 12 is herein cancelled. No new matter has been introduced.

Reconsideration of the present application in view of the foregoing amendments and the remarks below is respectfully requested.

Objection to the Declaration

The Declaration is objected to as neither inventor's post office address is included.

Applicants submit herewith a copy of the executed new Declaration which include the addresses of the both inventors.

Accordingly, Applicants respectfully request that the objection to the Declaration be withdrawn.

Objection to the Claims

Claims 4 and 5 are objected to because they lack commas, respectively, after the term "claim 1."

Each of claims 4 and 5 is amended to place a comma after the term "claim 1." Likewise, claims 2, 3, 6, 7, 9-11 and 13-17 are also amended for clarification purposes to insert commas after the references to the claims from which they depend.

Accordingly, Applicants respectfully request that the claim objection be withdrawn.

Claim Rejection under 35 U.S.C. § 112

(1) Claim 2 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, the Office Action states that "said compound" in claim 2 is ambiguous.

Claim 2 is herein amended to clarify that "said compound" is "said sulfamate compound."

Accordingly, the rejection of claim 2 under 35 U.S.C. § 112, second paragraph, should be withdrawn.

(2) Claim 11 is rejected under 35 U.S.C. § 112, second paragraph as being indefinite, because it specifies that "M" is "a metal", which is broader in scope than the definition of "M" recited in claim 10, from which claim 11 depends.

Claim 11 is herein amended to delete the phrase, "wherein M represents a metal." Further, claim 12 is cancelled as its limitation is included in claim 10, from which claim 11 depends. Consequently, claim 13 is amended to depend from claim 11.

Accordingly, the rejection of claim 11 under 35 U.S.C. § 112, second paragraph, should be withdrawn.

Claim Rejection under 35 U.S.C. § 103

Claims 1-6, 9 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over *Espino* in view of *Aoyama*.

The Office Action states that the reactions of *Espino* do not rely on rhodium metalloporphyrin as the catalytic entity, but it refers to "rhodium catalyzed C-H amination, generally," which suggests "that other forms of rhodium are of use in catalyzing the reactions taught in the reference." Since *Aoyama* discloses oxidation of olefins with a rhodium porphyrin complex, one of ordinary skill in the art would, according to the Office Action, "clearly find it obvious to substitute the rhodium salt employed in *Espino* et al's syntheses for *Aoyama* et al's rhodium porphyrin complex."

Applicants respectfully traverse the rejection.

The present application discloses the use of metalloporphyrin complexes as a catalyst for intramolecular amidation of sulfamates. The metalloporphyrin used in the present invention is specially designed to maximize catalytic turnover number and to provide *cis*-selectivity with high enantiomeric excess values.

The structure of rhodium carboxylates used as catalysts in *Espino* is very different from the metalloporphyrin catalysts disclosed in the present application. Rhodium carboxylates are binuclear complexes with Rh-Rh metal bonds (*i.e.*, a catalyst

molecule containing two rhodium atoms) connected to bidentate ligands. In contrast, the metalloporphyrin catalysts according to the present invention are mononuclear, containing a macrocyclic porphyrin ligand, which is a unique class of ligands.

Relying on the general statement in *Espino* that “C-H amination under Rh-catalysis has general applicability with a range of structurally disparate starting materials,” the Examiner asserts that one skilled in the art would be motivated to look for a catalyst, such as rhodium(III) porphyrin disclosed in *Aoyama*, for the formation of cyclic sulfamidates, because very small molar percentages of catalyst would be desirable in terms of cost effectiveness and a simple process for removal of the catalyst from the products. However, such a statement of general applicability by *Espino* is too speculative in nature to qualify as sufficient motivation to look to *Aoyama*. This is especially so, since *Aoyama* discloses “catalytic modification of **hydroboration-oxidation of olefin**”, which has nothing to do with the formation of cyclic sulfamidates.

Thus, Applicants submit that there is no motivation for one skilled in the art to combine “selective C-H bond oxidation” of *Espino* with rhodium(III) porphyrin catalyst used for hydroboration-oxidation of olefin in *Aoyama*.

Accordingly, Applicants respectfully request that the rejection of claims 1-6, 9 and 10 under 35 U.S.C. § 103(a) as being unpatentable over *Espino* in view of *Aoyama* be withdrawn.

Applicants believe that the pending claims are now in condition for allowance, an early notification of which is earnestly requested.

No fee is believed to be due for this submission. Should there be any deficiency in fees, please charge such fee(s) to Deposit Account No. 50-2215.

Dated: April 18, 2006

Respectfully submitted,

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Attachment: A copy of newly executed Declaration.